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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/785,297	02/24/2004	Ronald J. Morrissey	004522-00027	2079

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EXAMINER	
WONG, EDNA	

ART UNIT	PAPER NUMBER
1753	

DATE MAILED: 06/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/785,297	MORRISSEY, RONALD J.	
	Examiner	Art Unit	
	Edna Wong	1753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-22 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-22 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date July 2, 2004.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Specification

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because the word "said" is used in lines 1 and 3. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims **4-6, 8-11, 15, 17, 20 and 22** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 4

lines 2-3, the trademarks "Hamposyl C, Hamposyl L, Hamposyl O, Blancol, Blancol N, Rhodacal, and Rhodacal N" are indefinite.

Claim 5

lines1-2, "the pyridine or substituted pyridine compound" lacks antecedent basis when dependent upon Claim 1.

Claim 6

lines 1-3, it is unclear how this claim limitation is further limiting Claim 4. It is repeating the claim limitation of Claim 4.

lines 2-3, the trademarks "Hamposyl C, Hamposyl L, Hamposyl O, Blancol, Blancol N, Rhodacal, and Rhodacal N" are indefinite.

Claim 15

lines 2-3, the trademarks "Hamposyl C, Hamposyl L, Hamposyl O, Blancol, Blancol N, Rhodacal, and Rhodacal N" are indefinite.

Claim 17

line 1, "the surface-active material" lacks antecedent basis.

lines 2-3, the trademarks "Hamposyl C, Hamposyl L, Hamposyl O, Blancol, Blancol N, Rhodacal, and Rhodacal N" are indefinite.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

I. Claims **1-6** are rejected under 35 U.S.C. 103(a) as being unpatentable over **JP 11-302893** ('893).

JP '893 teaches an electroplating solution for the deposition of silver; said solution comprising:

(a) silver in the form of a complex of silver with hydantoin or a substituted hydantoin compound (page 2, [0029]; page 3, [0026]; and page 6, [0041]), together with

(b) an effective quantity of a non-precipitating electrolyte salt (= potassium hydroxide or potassium chloride) [pages 8-9, Tables 1-2; and page 10, [0063] to [0066]], and also

(c) an effective quantity of 2,2'-dipyridyl for the purpose of obtaining a mirror-bright to brilliant deposit (page 5, [0036]).

The electroplating solution further comprises an effective quantity of a pyridine or substituted pyridine compound for the purpose of improving the overall brightness of the deposit obtained (pages 3-4, [0027]).

The electroplating solution further comprises an effective quantity of surface-

active material for the purpose of further improving the overall brightness and brilliance of the deposit obtained (page 4, [0034]).

The pyridine or substituted pyridine compound is selected from the group consisting of nicotinamide, isonicotinamide, 2-aminopyridine, 3-aminopyridine, nicotinic acid and its salts, and isonicotinic acid and its salts (= pyridinecarboxylic acid = nicotinic acid) [page 2, [0012]].

The electroplating solution of JP '893 differs from the instant invention because JP '893 do not disclose the following:

a. said solution also comprising an excess of the hydantoin or substituted hydantoin compound, as recited in claim 1.

b. wherein the surface-active material is selected from the group consisting of Hamposyl C, Hamposyl L, Hamposyl O, Blancol, Blancol N, Rhodacal, and Rhodacal N, as recited in claims 4 and 6.

Regarding claim 1, JP '893 teaches that the hydantoin compounds act as a chelate component in the plating bath, and serve to raise the bath stability of the plating liquid further (page 6, [0041]).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the electroplating solution of JP '893 to have used an excess of the hydantoin or substituted hydantoin compound in the electroplating

solution because fully complexed or chelated ions in the plating bath would have raised the bath stability.

Furthermore, JP '893 teaches an amount of silver metals in the range of 0.1 to 100 g/l (page 4, [0028]) and an amount of hydantoin in the range of 1-200 g/l (page 6, [0042]). It is deemed that 0.1 g/l of silver metal and 200 g/l of hydantoin would have amounted to an excess of the hydantoin or substituted hydantoin compound in the electroplating solution.

Regarding claims 4 and 6, JP '893 teaches polyethylene glycol, polyoxyethylene alkylphenol, polyoxyethylene styrene phenol, polyoxypropylene polyoxyethylene polymer as examples of the non-ionic surfactant (page 4, [0034]).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the electroplating solution of JP '893 to have used Hamposyl C, Hamposyl L, Hamposyl O, Blancol, Blancol N, Rhodacal, and Rhodacal N as the surfactant because one skilled in the art has the skill to select an appropriate surfactant by routine experimentation based upon the desired reaction occurring since the surfactant would have determined the success of promoting disengagement of hydrogen bubbles at the cathode and preventing pitting, absent evidence to the contrary.

Furthermore, it has been held that the selection of a known material based on its suitability for its intended use supports a prima facie obviousness determination. See

MPEP § 2144.06 and § 2144.07.

Furthermore, it is possible that the compositions of Hamposyl C, Hamposyl L, Hamposyl O, Blancol, Blancol N, Rhodacal, and Rhodacal N contain such compounds, but is unbeknownst to the Examiner.

II. Claims **7-11** are rejected under 35 U.S.C. 103(a) as being unpatentable over **JP 11-302893** ('893) as applied to claims 1-6 above, and further in view of **Soutar et al.** (US Patent No. 5,955,141).

JP '893 describes an electroplating solution having the limitations recited in claims 1-6 of the instant invention, as explained above in **I.**

The electroplating solution of JP '893 differs from the instant invention because JP '893 do not disclose wherein the non-precipitating electrolyte salt is selected from the group consisting of the salts of sulfamic, hydrofluoric, nitric, fluoboric, glycolic, and lactic acids, as recited in claims 7-11.

Soutar teaches an electroplating solution for the deposition of silver. A buffering agent is included to ensure that the pH of the composition is maintained within a desired range. As the buffering agent, any compatible acid or base may be included. A compatible acid or base is an acid or base which in the amounts required in the composition does not result in the precipitation out of solution of the silver ions and/or

complexing agent. Suitable examples include potassium hydroxide and nitric acid (col. 6, lines 34-49).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the electroplating solution of JP '893 to have used salts of sulfamic, hydrofluoric, nitric, fluoboric, glycolic, and lactic acids as the non-precipitating electrolyte salt because these compounds are compatible to the potassium hydroxide disclosed by JP '893 (pages 8-9, Tables 1-2; and page 10, [0063] to [0066]) in a silver electroplating solution as taught by Soutar (col. 6, lines 34-49).

As to the calling the compounds a non-precipitating electrolyte salt or a buffering agent, it has been held that a newly discovered use or function of components does not necessarily mean the system is unobvious since this use or function may be inherent in the prior art. *Ex parte Pfeiffer* 135 USPQ 31.

III. Claims **12-17** are rejected under 35 U.S.C. 103(a) as being unpatentable over **JP 11-302893** ('893).

JP '893 teaches a process for the formation of a mirror-bright to brilliant electrodeposit of silver on a substrate comprising the step of:

electroplating said substrate in an electroplating solution (page 6, [0048]).

JP '893 is as applied for the reasons as discussed above in **I.** and incorporated

herein.

IV. Claims **18-22** are rejected under 35 U.S.C. 103(a) as being unpatentable over **JP 11-302893** ('893) as applied to claims 12-17 above, and further in view of **Soutar et al.** (US Patent No. 5,955,141).

JP '893 describes a process having the limitations recited in claims 12-17 of the instant invention, as explained above in **III.**

Soutar is as applied for the reasons as discussed above in **II.** and incorporated herein.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edna Wong whose telephone number is (571) 272-1349. The examiner can normally be reached on Mon-Fri 7:30 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Edna Wong
Primary Examiner
Art Unit 1753

EW
June 17, 2005